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## Factors influencing readiness towards *halal* logistics among food-based logistics players in Malaysia

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### Abstract

Logistics is part of supply chain which involves many business entities such as suppliers, manufacturers, distributors and retailers. All these entities will work together to acquire raw materials and transform them into final products. *Halal* logistics is an approach to avoid contamination of perishable, raw materials and food products during transportation or distribution activities. It is also to avoid products missed information and to ensure that Muslim consumers will receive and consume only the *Halalan Toyibban* products. In Malaysian Standard for *Halal* Logistics (MS 2400:2010), *halal* logistics requirements according to Shariah law are including the requirement of logistics providers for transportation, warehousing and retailing. The requirement usually involved from processing to handling, distribution, storage, display, serving, packaging and labeling. There are few concerns regarding the implementation of *halal* logistics among logistics players. First, there is concern whether these players follow all guidelines and standards for *halal* logistics. Second, there is concern whether these players segregate their workers and facilities in producing and distributing activities for *halal* and *non-halal* products. This study seeks to investigate factors that influence readiness towards *halal* logistics among food-based logistics players. Face-to-face interviews were carried out with 156 managers representing logistics companies located in Peninsular Malaysia. Factor analysis was carried out to analyze the data obtained from the managers. The results revealed that support from management, enforcement of Halal Assurance System (HAS), environments controls, employee acceptance and company vision to change were the factors that influenced readiness towards *halal* logistics.

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## 1. Introduction

The word '*Halal*' is originated from an Arabic word meaning permitted or allowable (JAKIM). *Halal* are things or actions that permitted by Shariah Law/Islamic Law and it should be performed to show an obligation towards Islamic faith. *Halal* aspect is not only restricted for ingredients of food products only. Based on the 5<sup>th</sup> principle of *Halal* (HDC, 2012), anything related to the *Halal* food or/and non-food products should be complied with Islamic rules including the logistics activities for the *Halal* products. Logistics activities are one of the entities in supply chain of products. In a way to serve *Halalan-Toyibban* products to end consumers, all part in *halal* supply chain for *halal* products should be conducted according to *Halal* best practices including logistics activities. *Halal* logistics activities involved *halal* transport, *halal* warehouse and *halal* retail (SIRIM, 2010). As reported by (Malaysia International Halal Showcase [MIHAS], 2013), *halal* demands for *halal* products are increasing due to fast growing of *halal* industry. About USD580 billion is needed to fulfil the growing demand for *Halalan-Toyibban* products.

To be ready towards an innovation of operation from conventional logistics operation to *halal* logistics operation, food-based logistics players in Malaysia should be prepared in few aspects in implementing *halal* logistics. This is to ensure that the food-based logistics players able to maintain and sustain with *halal* logistics operations for a long period. In 2012, Malaysia *Halal* Industry Development Corporation (HDC) had listed five logistics operators certified by JAKIM *Halal* certification and there is only one company was listed for early quarter of 2013. This statistics showed that logistics companies that involve in *halal* industry are small and they are not able to sustain their logistics operations according to JAKIM requirements for a long time. This problem might be a result from lack preparation among logistics companies on their managements aspects and others factors.

*Halal* logistics is considered as an innovation in logistics operations for logistics players. To ensure *Halalan-Toyibban* of food products, some improvement need to be done along the chain of supply chain for *halal* products. Upgrading from conventional logistics operations to *halal* logistics operations can be considered as an improvement. Apart from logistics players provided good logistics service, they also provided better logistics service for *halal* products. However, to provide good logistics service for *halal* products, few factors need to be considered. As an organization, logistics players need to be ready for various aspects. Technology factors, environmental factors, management's factors, and government factors by Tan *et al.* (2012) need to be considered in order to adopt the *halal* transportation for *halal* logistics in Malaysia. In addition, other factors that need to be considered if a company would like to change are organizational members' beliefs, attitudes and intention to change (Weiner, 2009).

Other than factors mentioned, perception towards change, vision to change, mutual respect and trust, change initiatives, management support, acceptance and how the organization manage the change also need to put into consideration (Susanto, 2008). Organizational culture, policies and procedure, past experienced, organization resources and structure also may be the factor that may influence the logistics players to be ready towards implementing *halal* logistics. Holt *et al.* (2007) however stated that, the readiness of organization are influenced by employees that capable to implement change, proposed changes is appropriate for the organization, leader who committed towards the changes, managements support and proposed the changes is beneficial to the organization. Although there are many factors that might influence readiness of organization to change from conventional logistics services to *halal* logistics service, but not all factors are affecting the logistics players. Thus, the objective of this study is to investigate factors that influence readiness towards *halal* logistics among food-based logistics players.

## 2. Literature review

*Halalan-Toyibban* supply chain is part of *halal* integrity to ensure the status of *halal* products. Logistics is part of supply chain involves three main type activities such as transportation, warehouse and retail which classified according to the Malaysia Standard for *Halal* Logistics (MS 2400:2010) (SIRIM, 2010). For instance, Ellram *et al.* (1999) stated that retail activities is more like customers' service activities which provide value-added benefits to

the supply chain in a cost-effective way. Customers will demand better service quality products, thus, to have better quality products, it will involve not only the retailer, but it will also involve the warehouse operator as well as the transport provider. Full chain *halal* information will involve from the manufacturing phase of the products, right to the every supply chain phase until the products reach to consumers. *Halal* logistics service may serve the customers with the logistics service according to the Standard for *Halal* Logistics. Logistics players who would like to offer *halal* logistics services must fulfil few requirements such as the company must have *Halalan-Toyibban* Management System, *Halalan-Toyibban* Management Plan and *Halalan-Toyibban* Assurance Pipeline and fulfil all requirements for premises, infrastructure, facilities and personnel (MS 2400:2010).

In meeting with the demand growth for *halal* logistics service, changes for logistics players towards *halal* logistics services are compulsory in order to survive and stay competitive in the market (Susanto, 2009). Logistics firm should no longer aim for the profits solely, but they need to look over other value added that benefit the firm itself as well as to the end consumers and customers (Walker and Jones, 2012). This may help society to get better quality of *halal* products with assurance on the supply chain operations. Changing from normal logistics service to *halal* logistics service may improve logistics industry and affect the competitive marketplace and corporate strategy to fulfil the *halal* industry demand.

Knowledge is very important components especially for a company to change the style or the mode of the management or its operations. According to Rogers (1995) in his Theory of Diffusion of Innovation (DOI), knowledge is the first part that should be measured to ensure the implementation of new things within the organization. In a way to ready towards *halal* logistics, knowledge about *halal* and *halal* logistics could be one of the indicators towards readiness among logistics players. Intention is also one of the components that reflect the readiness to change of an organization. According to Rollans *et al.* (2000) and Armenakis *et al.* (1993), intention ready to change will reflect not only the management level but also reflect the whole organizations as it is a core component to create the readiness.

### 3. Methodology

The conceptual model of this study was adapted from few models. Knowledge aspects adapted from the Theory of Diffusion of Innovation (DOI) reviewed by Sahin (2006), where knowledge is a basic element towards changing to implement something new. Holt (2007) and Weiner (2009) in their Readiness Theories, have included managements supports, organization vision to change, acceptance of employee towards changing, internal and external environments of organization and constraints that might be faced by organization that ready to change. While in meeting *halal* aspect, *Halal* Assurance System (HAS) has been included to be one of the readiness factors towards *Halal* logistics. In measuring the factors that influence the readiness towards *halal* logistics, a quantitative survey approach where face-to-face interviews were conducted using a structured questionnaire with 156 managers representing logistics companies located in Peninsular Malaysia. The details of the companies were obtained from the Directory of Logistics Companies published by the Company Commission of Malaysia. Forty 5-point Likert scale statements related to readiness factors were asked to the managers. Factors analysis was carried out to extract factors influencing the readiness.

### 4. Results and discussion

#### 4.1 Respondents profile

There were 26.3% of respondents in this study are owner of the companies while the remaining 73.7% of the respondents were logistics operation officer. Overall of the respondents were from the central region followed by the

east, the north and the south region which accounted for 7.7%, 13.5%, and 30.8% respectively. The resulted showed 38.5% of food-based logistics players involved mainly in retailing and transporting and warehousing services, accounted for 25% and 1.9% respectively while the remaining 34.7% represent mixed mode of food-based logistics operation. Only 34.6% companies showed that they had complied with others standards and 65.4% companies did not yet comply with any standard. About 63.5% companies showed high number of Muslim workers while remaining 36.5% showed present of both Muslims and non-Muslims workers.

#### 4.2 Factors that influence readiness towards *halal* logistics

There were five factors identified in this study extracted using the exploratory factor analysis. The statements extracted were grouped into five major factors as in Table 1. Vision to change, *Halal* Assurance System, environment, employee acceptance and managements support were revealed as the five factors that influenced the readiness towards *halal* logistics.

Keiser-Meyer-Olkin (KMO) showed 0.776 which was above 0.6 and the Barlett's Test showed the significant level was significant at 0.01, therefore factor analysis for this study is appropriate. Cronbach Alpha for reliability test for each factor showed above 0.5 and this was explained that all the questions were valid and reliable (Table 2). The eigenvalues for each factor showed any factors with eigenvalues equal and above from 1.229 need to be retained. For each factor, variance explained for vision to change was 23.17%, variance explained for *Halal* assurance system factor was 22.17%, and variance explained for environments factors was 12.9% while variance explained for employee acceptance and managements support were 12.7% and 9.8% respectively.

#### 4.3 Vision to change

Vision to change particularly comes from the top level management. If the top level management has a vision to change their operation according *halal* logistics requirements, all the members in the company need to learn, to understand, and able to handle all the logistics operations according to what JAKIM and SIRIM have aligned for *halal* logistics operation system. However, leaders of organization need to be aware that vision should only give a direction to employees which important parts of a change. Policies and practices will help and provide guideline for all managements and technical level to perform right implementation of *halal* logistics. New vision of leadership should be put into consideration in a way to ready and prepare to change towards *halal* logistics.

Table 1: Factors influencing readiness towards *halal* logistics

Factors extracted	Factor loading	Cronbach alpha	Cumulative variance (%)	Eigenvalues
<b>Factor 1: Vision to Change</b>				
V1 Ready for new policies and practices	0.866	0.957	23.17	16.4
V2 Important to understood new policies and practices	0.851			
V3 New vision in leadership	0.843			
V4 Company ready to deal with Halal Logistics	0.835			
V5 Company ready to re-alignment	0.795			
V6 All members in company need to understand Halal Logistics	0.572			
V7 All members in company will be given opportunity to deal with Halal Logistics	0.557			
V8 Company able to provide proper facilities	0.542			

Factor 2: Halal Assurance System

HA1 Advance information system help to ensure the <i>halal</i> system	0.861			
HA2 Company willing to invent new operation to meet <i>halal</i> requirements	0.854	0.950	45.29	3.530
HA3 Logistics player should apply traceability system				
HA4 Customers also need to understand <i>Halal</i> Logistics guidelines	0.807			
HA5 Halal Logistics need <i>Halal</i> Assurance System	0.769			
HA6 <i>Halal</i> Assurance will provide more awareness				
HA7 ICT service platform provide by HDC help <i>Halal</i> Logistics operation	0.767			
	0.765			
HA8 Customers will be more confident to use <i>Halal</i> Logistics service	0.711			
	0.699			

Factor 3: Environments

E1 Employee are allowed to make decision	0.768	0.919	58.20	2.046
E2 Global <i>halal</i> market affect <i>Halal</i> Logistics services	0.722			
E3 Management should create employees' teamwork	0.697			
E4 Employee trust and respect is needed	0.616			
E5 Company should study on market competitiveness	0.605			
E6 Company will provide advice and training regarding to <i>Halal</i> Logistics	0.600			

Table 2: KMO and bartlett's test

Keiser-Meyer-Olkin Measure of Sampling Adeuqacy	0.776
Barlett's Test of Sphericity	Approx. Chi-Square
	df
	Sig

#### 4.4 Management support

Supportive actions play more by employees in the companies compare to the top level management. Support from other level of managements is important to deliver the ideas, instructions and correct direction to perform *halal* logistics operation and activities. This will help the whole organization to be ready and able to perform *halal* logistics system in their companies and provide proper preparation for the whole system to face any failure or problems and risks. In getting supported by other level of managements, high level management needs to explain and make a comprehensive training so that all level of management able to understand their role in performing *halal* logistics.

#### 4.5 Environmental factors

There are internal and external environments could be effect the readiness to change of an organization. Both environmental may affect the readiness of the organization. An efficient workplace will promote better performance among employees to perform the *halal* logistics operations according the *Halal* logistics requirement. Job performance may increase when the employee able to work in a very conducive workplace. Workplace will be more efficient with the existence of teamwork and good relationship among employees while external environments involve few entities. For instance, governments sometimes can be very good assistant for organization to change but they also may be a barrier for transformation. Logistics players need to prepare to face all the challenge towards changing.

#### 4.6 Employees acceptance

Employees' acceptance is very important to a company or organization to prepare towards readiness. There will be much easier to explain to Muslims workers about the changes within the logistics operation compare to non-Muslims workers. *Halal* training will be the most important part to deliver the *halal* concept to the workers. Toughest challenge will be faced by the management's level when to explain about the *halal* concept to the non-Muslims workers resulted from the detail operation and information system process flow. It is very important to get employees acceptance from management level until the workforce level to accept all the *halal* logistics requirements.

#### 4.7 Halal Assurance System (HAS)

*Halal* Assurance System (HAS) is also one of the important aspects that need to be considered when logistics companies involved in *halal* sector. *Halal* assurance system provides general guidelines for all *halal* logistics operations on the company. *Halal* assurance system provides rules to ensure the integrity of *halal* products along its supply chain. Assurance system in *halal* sector is to make sure every entity who involve along the supply chain of *halal* products fulfill all the *Halalan-Toyibban* requirements for all aspects such as management system, *halal* risk assessment, *halal* facilities, equipment and infrastructure. The assurance system will give information about the *halal* products from the ingredients, up to manufacturing process and logistics activities which comply with *halal* requirements from JAKIM and Malaysia Standard for *Halal* food preparation, handling, and logistics.

### 5. Conclusions

Halal logistics players need to be aware and ready with five aspects that have been discussed earlier. Logistics players need to consider five factors before embark into *halal* logistics sector. Logistics players need to have the vision to change from conventional logistics operation to *halal* logistics operations. Further, logistics players need to gain the support from all level of managements within the company as well as to gain employees acceptance regarding *halal* operations and *halal* activities for logistics. Other than that, the condition of the internal and external environments of the logistics company also need to be put into consideration and *Halal* Assurance System (HAS) need to be established for each company involved in the *halal* sector. Food-based logistics players who had a vision towards *halal* logistics should be prepared with a new team for *halal* management that will be overseeing all aspects about *halal* logistics operations. Logistics companies are advisable to have at least a *halal* advisor or *halal* internal auditor which will help management to monitor day-to-day logistics operations and the companies also could hire trainers to train their employees on *halal* training program.

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